

We Claim:

1. A process for delivering a nucleic acid to a cell, comprising:
 - a) attaching a labile linkage to a membrane-active compound;
 - b) adding the membrane-active compound to a solution containing the nucleic acid;
 - c) introducing the membrane-active compound and nucleic acid to a cell; and,
 - d) transfecting the cell.
2. The process of claim 1 wherein the labile linkage is selected from the group consisting of pH-labile, very pH-labile and extremely pH-labile.
3. The process of claim 1 wherein the labile linkage is selected from the group consisting of disulfide, acetal, ketal, enol ether, enol ester, amide, imine, imminium, enamine, silyl ether, silazane, and silyl enol ether bonds.
4. The process of claim 2 wherein the labile linkage is selected from the group consisting of diols, diazo, ester, sulfone, and silicon-carbon bonds.
5. The process of claim 1 wherein the membrane active compound consists of a polymer.
6. The process of claim 5 wherein the polymer consists of a peptide.
7. The process of claim 6 wherein the peptide consists of melittin.
8. The process of claim 6 wherein the peptide consists of KL3.
9. The process of claim 6 wherein the peptide consists of pardaxin.
10. The process of claim 1 further comprising a polymer in the solution.
11. The process of claim 10 wherein the polymer is attached to the membrane-active compound by the labile linkage.
12. The process of claim 11 wherein the polymer inhibits the membrane-active compound.
13. A process for delivering a nucleic acid to a cell, comprising:
 - a) attaching a labile linkage to a polymer for linking to a molecule;
 - b) adding the polymer to a solution containing the nucleic acid;
 - c) introducing the polymer and nucleic acid to a cell; and,
 - d) transfecting the cell.
14. The process of claim 13 wherein the labile linkage is selected from the group consisting of pH-labile, very pH-labile and extremely pH-labile.
15. The process of claim 13 wherein the labile linkage is selected from the group consisting of disulfide, acetal, ketal, enol ether, enol ester, amide, imine, imminium, enamine, silazane, silyl ether, and silyl enol ether bonds.

16. The process of claim 14 wherein the labile linkage is selected from the group consisting of diols, diazo, ester, sulfone, and silicon-carbon bonds.
17. The process of claim 13 further comprising a labile linkage between a membrane active compound and the polymer.
18. The process of claim 17 wherein the polymer consists of a peptide.
19. The process of claim 18 wherein the peptide consists of melittin.
20. The process of claim 18 wherein the peptide consists of KL3.
21. The process of claim 18 wherein the peptide consists of pardaxin.
22. The process of claim 13 further comprising a membrane-active compound in the solution.
23. The process of claim 22 wherein the polymer is attached to the membrane-active compound by the labile linkage.
24. A complex for delivering a nucleic acid to a cell, comprising:
 - a) a membrane-active compound;
 - b) a polymer; and,
 - c) the nucleic acid.
25. The complex of claim 24 wherein the membrane-active compound contains a labile linkage.
26. The complex of claim 24 wherein the polymer contains a labile linkage.
27. The complex of claim 25 wherein the polymer is attached to the membrane-active compound by the labile linkage.
28. The complex of claim 24 wherein the polymer inhibits the membrane-active compound.
29. The process of claim 24 wherein the labile linkage is selected from the group consisting of pH-labile, very pH-labile and extremely pH-labile.
30. The process of claim 24 wherein the labile linkage is selected from the group consisting of disulfide, acetal, ketal, enol ether, enol ester, amide, imine, iminium, enamine, silyl ether, silazane, and silyl enol ether bonds.
31. The process of claim 29 wherein the labile linkage is selected from the group consisting of diols, diazo, ester, sulfone, and silicon-carbon bonds.

32. A process for delivering nucleic acids to a cell, comprising:
 - a) forming a labile linkage between two compounds to form a complex containing nucleic acid;
 - b) delivering the complex to the cell;
 - c) removing the labile linkage; and,
 - d) transfecting the cell.
33. The process of claim 32 wherein the labile linkage is selected from the group consisting of pH-labile, very pH-labile and extremely pH-labile.
34. The process of claim 33 wherein the compounds are selected from the group consisting of polymers, amphipathic compounds, membrane-active compounds, nucleic acids, lipids, and liposomes.